

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VOLTERRA SEMICONDUCTOR LLC,)
Plaintiff,)
v.) C.A. No. 19-2240-CFC-SRF
MONOLITHIC POWER SYSTEMS,) **JURY TRIAL DEMANDED**
INC.,)
Defendant.)

**BRIEF IN SUPPORT OF DEFENDANT'S MOTION TO DISMISS
THE SECOND AMENDED COMPLAINT**

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I. NATURE AND STAGE OF PROCEEDINGS

In December 2019, Plaintiff Volterra Semiconductor LLC (“Volterra”) filed its original Complaint against Defendant Monolithic Power Systems, Inc. (“MPS”) for alleged infringement of U.S. Patent Nos. 6,362,986 (“the ’986 patent”), 7,525,408 (“the ’408 patent”), and 7,772,955 (“the ’955 patent”) (collectively, the “Asserted Patents”). D.I. 1. Volterra then filed the First Amended Complaint (“FAC”), deleting instances of “information and belief” but failing to identify any new factual support for its infringement allegations. D.I. 11. Though the FAC broadly named all MPS DC-to-DC converters as the “Accused Products,” all of Volterra’s allegations were limited to a single product demonstrated at a 2019 trade show. D.I. 11 ¶18.

In April 2020, MPS filed a motion to dismiss the FAC for failure to state a claim, D.I. 15, and a separate motion to disqualify Fish & Richardson (“Fish”) as Volterra’s counsel based on Fish’s prior representation of MPS involving DC-to-DC power converters that were broadly accused in the FAC. D.I. 17. MPS also moved to strike the portion of the FAC that accused all MPS DC-to-DC converters, since Volterra’s allegations were limited to the 48V-1V Power Solution. D.I. 37. During the recent scheduling conference with the Court, the parties agreed that MPS would withdraw its pending disqualification motion as long as Volterra agreed to narrow the scope of the Accused Products to be the 48V-1V Power

Solution (“48V-1V”) and “substantially similar” products. Scheduling Conf. Tr. (Exhibit A) at 14:9-16:24; 28:7-17; 34:14-35:9. Though Fish initially sought to obtain discovery on the general category of “***couple inductor*** based DC-to-DC converters,” the parties ultimately settled on a much narrower definition of Accused Products. *Id.* at 7:14-8:9 (emphasis added). Fish agreed that “substantially similar” products would only allow Volterra to seek discovery on MPS products with the “same architecture” and “same design” as the accused 48V-1V but might be offered under “different names.” *Id.* at 14:9-16:2.

After this Scheduling Conference, Volterra filed its Second Amended Complaint (“SAC”). D.I. 74 (Redacted). Per party agreement, the SAC narrowed the scope of the Accused Products to be the “48V-1V Power Solution” and “other substantially similar products.” *Id.* ¶18. The SAC added new allegations related to its indirect infringement claims, but it did not amend any of the allegations specific to its direct infringement claims.

II. SUMMARY OF THE ARGUMENT

The SAC should be dismissed under Fed. R. Civ. P. 12(b)(6) because none of Volterra’s direct or indirect infringement claims are adequately pleaded.

Regarding direct infringement, Volterra does not allege enough facts for the Court to reasonably infer that the detailed structural and operational claim limitations of the Asserted Patents are met. Volterra asserts that the accused

48V-1V satisfies these limitations based on two sources of information: (1) a high level drawing, and (2) a picture of a circuit board from two short YouTube videos. *Id.* ¶30. But these pictures only show limited information about the overall dimensions and placement of the components, and nothing about their internal connections and structures. And Volterra cannot rely on its own annotations of these drawings as facts supporting that the claimed structural and operational elements are met. *Id.* ¶¶30, 32, 34, 36, 38, 50-54, 56, 68-70, 72, 74, 76, 79-82, 84, 86, 88, 90, 92, 94-100, 102, 104, 106, 108, 110.

Volterra's indirect infringement claims should also be dismissed because the SAC fails to sufficiently allege: (1) any direct infringement by a third party that can support an allegation of indirect infringement, (2) MPS's pre-suit knowledge of the Asserted Patents needed to maintain its indirect infringement claims, and (3) additional elements required to plead inducement and contributory infringement, including specific intent to cause others to infringe or that any MPS component is especially made or adapted for use in an infringement and not suitable for substantial non-infringing use. Any of the above three reasons is independently sufficient to warrant dismissal of the indirect infringement claims.

III. STATEMENT OF FACTS

A. The Asserted Patents

For the '986 patent, Volterra alleges that MPS infringes independent claim 17 and its dependent claims 18, 20-21, and 23. D.I. 74 ¶26. For the '408 patent, Volterra alleges that MPS infringes independent claim 14 and its dependent claim 20. *Id.* ¶48. For the '955 patent, Volterra alleges that MPS infringes independent claims 12 and its dependent claims 13-15, independent claim 16 and its dependent claims 17-21, and independent claim 23 and its dependent claims 22-28. *Id.* ¶62. Each of these claims recites detailed structural and operational limitations related to a specific type of DC-to-DC converter.

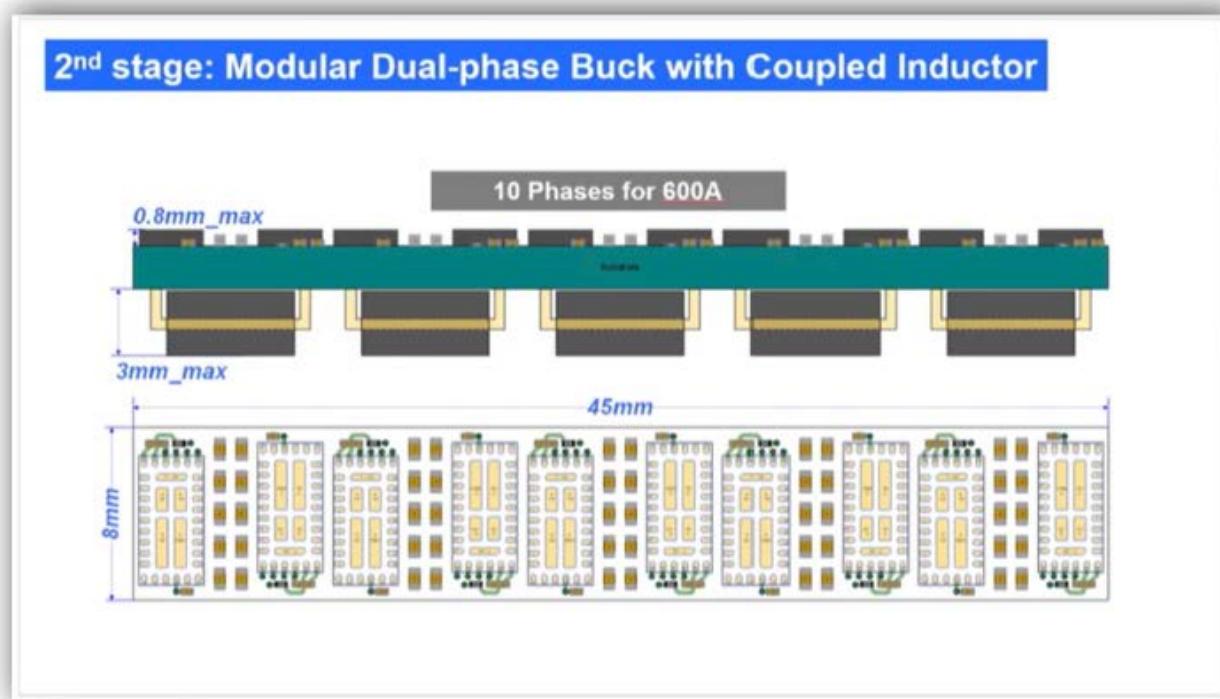
B. Volterra's Complaints

Volterra original Complaint, D.I. 1, relied *almost entirely* on “information and belief” to support its infringement allegations. After MPS pointed out deficiencies in this Complaint, Volterra filed its FAC. But the FAC did not add any new facts. All it did was remove “information and belief” statements and add new claims. MPS advised Volterra that the FAC did not cure the deficiencies of its original Complaint and requested that it be dismissed. Volterra did not. Instead it filed its SAC, adding new allegations to bolster its indirect infringement claims, while leaving its previous direct infringement allegations unchanged. As in previous versions, Volterra’s SAC relies entirely on two short YouTube videos that discuss the high-level features of the 48V-1V at a 2019 trade show. *Id.* ¶¶26-38,

48-56, 66-110. The videos include an annotated drawing and a picture of a portion of a circuit board in the 48V-1V. *Id.* ¶¶30, 32, 34, 36, 38, 50-54, 56, 68-70, 72, 74, 76, 79-82, 84, 86, 88, 90, 92, 94-100, 102, 104, 106, 108, 110. But neither the drawing nor the partial circuit board picture illustrate the internal structures and connections that are specifically claimed in the Asserted Patents.

C. Volterra's Direct Infringement Allegations

Volterra's direct infringement allegations all revolve around the structure and operation of a single 48V-1V product discussed at the APEC 2019 conference. Volterra's only factual support for its allegations regarding how this controller works comes from the annotated drawing and picture of the circuit board from two short YouTube videos. As reproduced below, the unannotated version of the drawing shows what information is actually conveyed. *Id.*



The above drawing Volterra relies on is a layout. But this layout is not a technical specification or circuit diagram, and it does not illustrate how a circuit is constructed. It does not provide any details about the internal structure or circuit connections of the components indicated.

D. Volterra's Indirect Infringement Allegations

1. Alleged Knowledge of Asserted Patents

In the original Complaint and FAC, Volterra failed to allege any facts that MPS had pre-suit knowledge of the Asserted Patents. After the Court noted that the original Complaint could not serve as the sole basis for pleading the requisite knowledge for indirect infringement, Ex. A at 19:19-23:21, Volterra filed another amended complaint (the SAC) in an attempt to cure this deficiency. In particular,

the SAC alleges that MPS had pre-suit discussions with potential customers about Volterra's patents related to "coupled inductor based voltage converters." D.I. 74 ¶¶23(a-c), 45(a-c), 63(a-c). But Volterra does not allege that MPS discussed any of the specific Asserted Patents with potential customers. Nor does Volterra allege that MPS discussed any patents related to—in the same patent family as—the Asserted Patents with potential customers.

The SAC also newly alleges that two MPS employees, Jinghai Zhou and Yan Dong, had pre-suit awareness of the Asserted Patents based on a couple of citations in a long list of references included in their graduate dissertations from over a decade ago (and at a time prior to their employment with MPS). For example, the SAC alleges:

- Jinghai Zhou listed the '986 patent, but no other Asserted Patents, as one of 136 references cited in his 2005 dissertation. *Id.* ¶23(d).¹
- Yan Dong listed three papers published by one of the named inventors of the Asserted Patents out of 90 references cited in his 2009 dissertation. *Id.* ¶¶23(d), 45(d), 63(d).²

¹ The SAC discusses "Mr. Zhou's April 22, 2005 Dissertation, entitled 'High Frequency, High Current Density Voltage Regulators.'" *Id.*

² The SAC discusses "Mr. Dong's Dissertation, entitled 'Investigation of Multiphase Coupled-Inductor Buck Converters in Point-of-Load Applications.'" *Id.*

These citations were made before either individual began working at MPS, and well over a decade before MPS’s alleged infringing conduct began (e.g., demonstration at the 2019 trade show).

2. Allegations of Inducement

The SAC alleges various theories of inducement. First, the SAC alleges that MPS’s marketing materials, videos, and trade show demonstration of the accused 48V-1V generally “encourage” infringing activity. *Id.* ¶¶24(a), 46(a), 64(a). But Volterra alleges no facts about the existence of any third party who actually purchased the 48V-1V or used it in an infringing manner.

Second, the SAC alleges that MPS’s technical documentation about two MPS controllers (MP2888A, MP2965) encourages its “customers” to engage in infringing activity. *Id.* ¶¶24(b-c), 46(b-c), 64(b-c). But the MP2888A and MP2965 controllers are not Accused Products. Nor does Volterra allege that these controllers infringe the Asserted Patents in any way.

Third, the SAC alleges that MPS generally “coordinates with suppliers” to manufacture the coupled inductors included in the Accused Products. *Id.* ¶¶24(d), 46(d), 64(d). But Volterra alleges no specifics about how this “coordinat[ion] with suppliers” encourages infringement.

Fourth, the SAC also makes generic allegations of inducement based “on information and belief.” For example, “on information and belief,” Volterra alleges

that MPS provides support to generic “customers” to facilitate “infringing testing, marketing, importation, and sales activity.” *Id.* ¶¶24(e), 46(e), 64(e). “[O]n information and belief,” Volterra also alleges that MPS provides its “customers, distributors, and suppliers” with Accused Products so that they may be “used, sold, offered for sale, and/or imported into the United States” by these generic third parties. *Id.* ¶¶24(f), 46(f), 64(f). Volterra pleads no facts to support that MPS had any specific intent to cause infringement by performing these alleged acts of inducement.

3. Allegations of Contributory Infringement

Under a contributory infringement theory, the SAC alleges that MPS “contributes to its customer’s infringement” by manufacturing two MPS controllers (MP2888A, MP2965) that can operate in “Couple Inductor Mode.” *Id.* ¶¶25(a), 47(a), 65(a). But as discussed above, neither controller is an Accused Product or alleged to infringe the Asserted Patents in any way. Critically, Volterra alleges no facts to show that these controllers are especially adapted for use in an infringement or that they are unsuitable for substantial non-infringing use. To the contrary, as the SAC itself shows, the same portions of the datasheets that Volterra relies on to support couple inductor mode also show how this same mode can be “disable[d].” *Id.* ¶24(b) (emphases added below).

Bits	Bit Name	Description
15:10	RESERVED	Unused. X indicates that writes are ignored and reads are always 0.
9	OCW_PWRALT_EN	Enable bit to assert PWR_IN_ALT# when the sensed output current is higher than IOUT_OC_WARN_LIMIT. IOUT_OC_WARN_LIMIT is set with the PMBUS command IOUT_OC_WARN_LIMIT (4Ah). 1'b0: does not assert PWR_IN_ALT# when IOUT exceeds the OC warning limit 1'b1: assert PWR_IN_ALERT# when IOUT exceeds the OC warning limit
8	PH1_CPL_EN	Enable couple inductor mode in 1-phase operation. This bit is for Rail 1 only. When enabled, at 1-phase mode, PWM4 also pulls low when PWM1 is high, so the low-side MOSFET of Phase 4 is on to conduct the Phase 4 coupled current. 1'b0: disable couple inductor mode for 1-phase operation 1'b1: enable couple inductor mode for 1-phase operation
7	CPL_MODE_EN	Enables Rail 1 couple inductor mode. 1'b0: disable couple inductor mode 1'b1: enable couple inductor mode

Bits	Bit Name	Description
7:6	RESERVED	Unused. X indicates that writes are ignored and always read as 0.
5	COUPLE_INDUCTOR_PWM6	PWM6 performance selector to fit coupled inductor operating mode. 0: PWM6 remains in tri-state when the controller is running in 1-phase CCM or DCM. This is used for normal inductor operating mode. 1: PWM6 pulls low while PWM1 is high when the controller is running in 1-phase CCM or DCM. This is used for coupled inductor operating mode.
4	COUPLE_INDUCTOR_EN	Enable bit for coupled inductor operating mode. 0: disable 1: enable

IV. LEGAL STANDARDS

A. Motion to Dismiss

To state a patent claim of direct or indirect infringement upon which relief can be granted, the “complaint must contain sufficient factual matter, accepted as true, to ‘state a claim for relief that is plausible on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). A claim is plausible on its face if it contains sufficient facts to support a “reasonable inference” of liability. *Id.* If the pleaded facts “do not permit the court to infer more than the mere possibility of misconduct,” dismissal is warranted. *Id.*

at 679. “Where a complaint pleads facts that are ‘merely consistent with’ a defendant’s liability, it ‘stops short of the line between possibility and plausibility of entitlement to relief.’” *Id.* at 678.

To adequately plead indirect infringement, plaintiff must allege sufficient facts for the Court to infer that the defendant “had knowledge of the plaintiff’s patents and that [its] products infringed on those patents.” *MONEC Holding AG v. Motorola Mobility, Inc.*, 897 F. Supp. 2d 225, 229 (D. Del. 2012). This knowledge prong requires pleading either “actual knowledge [of the patents-in-suit] or willful blindness.” *Id.* “[T]he complaint itself cannot serve as the basis for a defendant’s actionable knowledge” for purposes of indirect infringement. *VLSI Tech. LLC v. Intel Corp.*, 2019 WL 1349468, at *2 (D. Del. Mar. 26, 2019).

Indirect infringement includes inducement and contributory infringement. To adequately plead inducement, the complaint must additionally plead facts plausibly showing that the accused infringer (1) “specifically intended another party to infringe the patent” and (2) “knew that the other party’s acts constituted infringement.” *Dynamic Data Techs., LLC v. Amlogic Holdings Ltd.*, 2020 WL 4365809, at *2 (D. Del. July 30, 2020). To plead inducement, the complaint must allege “culpable conduct, directed to encouraging infringement, not merely that the inducer had knowledge of the direct infringer’s activities.” *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc in relevant part).

To adequately plead an allegation of contributory infringement, the complaint must additionally allege facts to plausibly show that the accused infringer “knew that its components were especially made or especially adapted for use in an infringement” and “that the components sold or offered for sale have no substantial non-infringing uses.” *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1338 (Fed. Cir. 2012).

V. ARGUMENT

The SAC should be dismissed because both of Volterra’s direct and indirect infringement allegations are insufficiently pleaded.

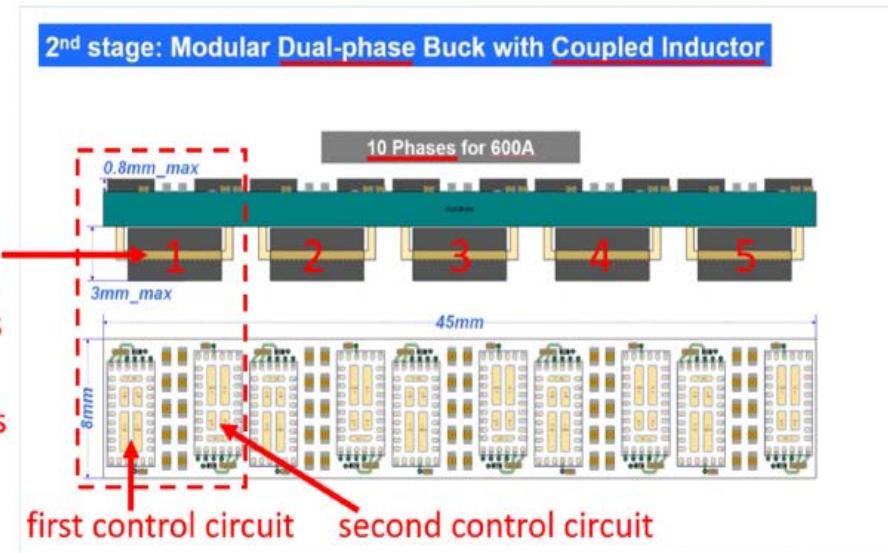
A. Volterra’s Direct Infringement Allegations Should be Dismissed

Volterra fails to identify any factual support to plead that the structural and operational limitations required by the Asserted Patents are met. D.I. 74 ¶¶26-38, 48-56, 66-110. Volterra’s SAC (like its original Complaint and FAC) relies entirely on two YouTube videos that do not provide factual support for its allegations. *Id.* As a result, Volterra’s claims should be dismissed for failure to state a claim.

1. Volterra Fails to Sufficiently Plead Direct Infringement of the ’986 Patent

Volterra’s annotated drawing (reproduced below) fails to provide enough detail to allege that the 48V-1V “orient[s], in like direction, first and second

windings about a common core to increase coupling between the windings,” as required by independent claim 17 of the ’986 patent. *Id.* ¶¶ 29-30.



That the annotated drawing includes the phrase “coupled inductor” does not say anything about the orientation of the windings and certainly does not show any increased coupling. *Id.* For “complex” technologies, the SAC must allege more detail to allow a Court to infer that these specific structural and operational limitations are plausibly met. *See DIFF Scale Operation Research, LLC v. MaxLinear, Inc.*, 2020 WL 2220031, at *1 n.2, *2 (D. Del. May 7, 2020).

Because independent claim 17 is insufficiently pleaded, its dependent claims 18, 20-21, and 23 should also be dismissed.

2. Volterra Fails to Sufficiently Plead Direct Infringement of the '408 Patent

Volterra's annotated drawings (reproduced below) likewise fail to provide enough detail to allege that the 48V-1V has "connecting magnetic elements," with "each winding being wound about a respective connecting element and at least partially through at least one passageway," as required by claim 14 of the '408 patent. D.I. 74 ¶¶51, 53.

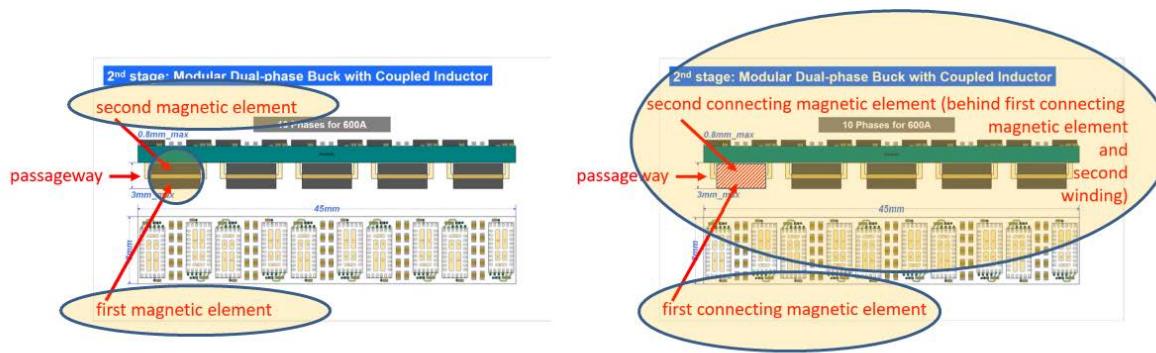
First, Volterra admits that the drawings (shown below) do not depict a "second connecting magnetic element" and simply makes the unsupported, conclusory assertion that it is "behind [a] first connecting magnetic element and second winding." *Id.* ¶¶51, 53.



Reproduced from SAC ¶¶51, 53 (highlighted circles added)

Second, Volterra points to the same structure for the claimed “magnetic elements” and the claimed “connecting magnetic elements.” *Id.* The ’408 patent claims and discusses first and second “magnetic elements” and “connecting magnetic elements” as three different things – (1) “first” “magnetic element,” (2) “second” “magnetic element,” and (3) N “connecting magnetic elements.”

In contrast, as shown in the drawings below, Volterra points to the same item in the same location for all three: the first and second “magnetic elements” and the “connecting magnetic elements.” *Id.*



Reproduced from SAC ¶¶51, 53 (highlighted circles added)

Volterra cannot point to the same thing to satisfy three different limitations in the claims. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Where a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct component[s]’ of the patented invention.”).

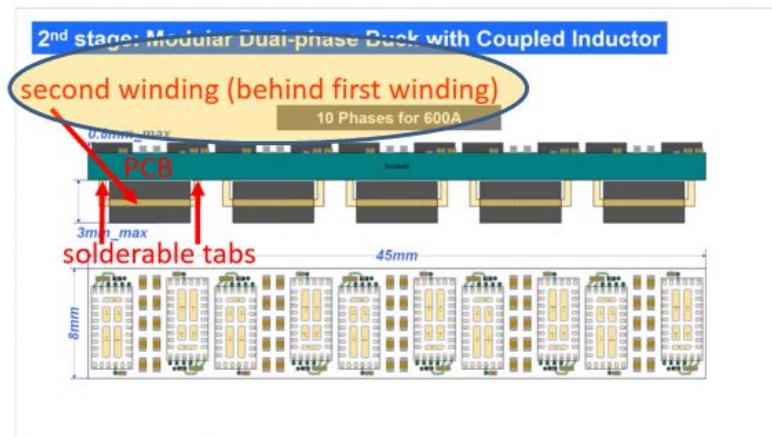
Because independent claim 14 is insufficiently pleaded, its dependent claim 20 should be dismissed too.

3. Volterra Fails to Sufficiently Plead Direct Infringement of the '955 Patent

Volterra's annotated drawing also fails to provide enough detail to allege that the 48V-1V includes "the cross-sectional area of the passageway between the windings being at least 50% free of magnetic material," as required by claims 12 and 16 of the '955 patent. Volterra baldly asserts that the drawing "indicates the use of coupled inductors to convert an intermediate input voltage to an output voltage of 1 volt, and the use of coupled inductors in the demonstrated power converter indicates that the cross-sectional area of the passageway between the windings is at least 50% free of magnetic material." D.I. 74 ¶¶70, 81. But nothing in the drawing permits the inference that the passageway has any material in it, let alone that it is at least 50% free of magnetic material. This dearth of factual support is underscored by Volterra's own admission (in the drawing) that the second winding is not visible and allegedly "behind [a] first winding" in the annotated drawing. *Id.* ¶70. Volterra cannot allege that the area between windings is "50% free of magnetic material," as claimed, when it is not even able to identify

the alleged second winding or the area between the first and second windings.

For claims 12 and 23 of the '955 patent, Volterra's annotated drawing also fails to provide enough detail to allege the 48V-1V includes a "separation distance [between the first and second windings throughout the passageway] greater than the height of the passageway." Volterra relies entirely on the following statement:



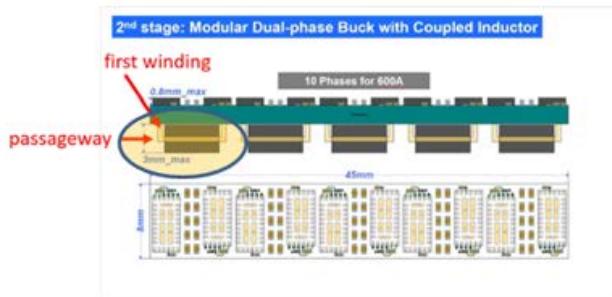
Reproduced from SAC ¶70 (highlighted circle added)

"the layout describes outputting 600A of current, and the ability to achieve this high current from the design demonstrated in the layout indicates that the separation distance is greater than the height of the passageway shown." *Id.* ¶¶70, 100. While the layout includes a subtitle ("10 Phases for 600A"), nothing about that phrase indicates that the alleged "separation distance [between the first and second windings throughout the passageway is] greater than the height of the passageway."

Moreover, Volterra admits it has no factual support for this limitation by

indicating that the linear separation distance is allegedly “into [the] page.” *Id.* No separation distance is depicted that is discernable or measurable from the annotated drawing and no additional information is provided in the cited YouTube videos. Therefore, Volterra’s conclusory statement and speculative annotations provide no factual support that the 48V-1V meets this limitation.

For claim 23 of the ’955 patent, Volterra’s annotated drawings also fail to provide enough detail to allege that the 48V-1V includes a “first winding . . . contacting the third planar surface,” and a “second winding . . . contacting the fourth planar surface.” *Id.* ¶¶96-97.



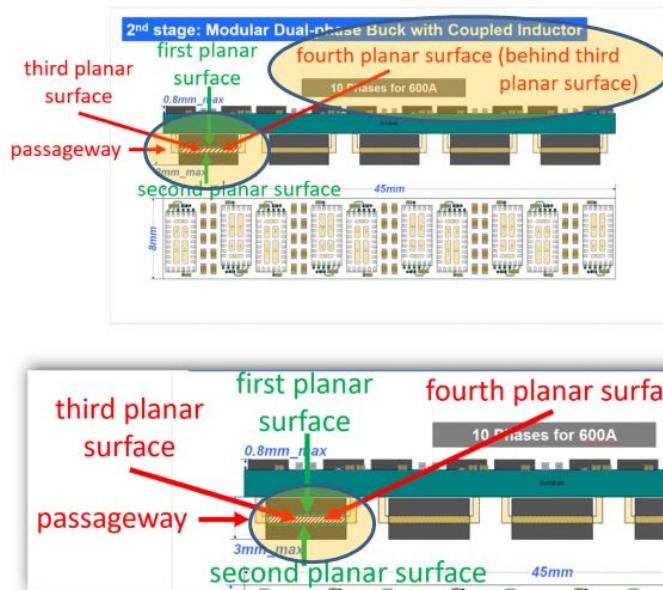
*Reproduced from SAC ¶96
(highlighted circles added)*



*Reproduced from SAC ¶97
(highlighted circles added)*

First, it is unclear what Volterra is pointing to as the claimed first and second winding as well as the claimed first, second, third, and fourth planar surfaces.

Id. ¶¶95-97. As shown in the highlighted circles in the drawings above and below, all of Volterra's annotations appear to point to the same area of the drawing. *Id.*



Reproduced from SAC ¶95 (highlighted circles added)

Second, the drawing does not provide support for a winding “contacting” a third or fourth planar surface. As shown in the figures above, Volterra admits that the fourth planar surface and the second winding are not even depicted in the drawing because they are allegedly “behind [the] third planar surface” and “behind [a] first winding,” respectively. *Id.* ¶¶95, 97. Because one of the claimed surfaces and one of windings cannot even be seen in the drawing, the drawing cannot in any way show how that winding is allegedly contacted by that surface.

To analogize, if the drawing was a map, the fourth planar surface was a road, and the second winding was a building, Volterra is essentially saying that the drawing provides support for the notion that one of the buildings (i.e., the second winding) contacts one of the roads (i.e., the fourth planar surface) even though neither the road nor the building are shown in the map. Volterra's allegations are untethered to sufficient factual support.

Dependent claim 17 and the other asserted dependent claims should be dismissed at least for the reason that there is insufficient factual support for the independent claim from which they depend.

B. Volterra's Indirect Infringement Allegations Should Be Dismissed

The Court should dismiss Volterra's indirect infringement allegations for three independent reasons. First, Volterra's indirect infringement claims fail because the underlying allegation of direct infringement is insufficiently pleaded. Second, the SAC fails to adequately allege pre-suit knowledge of the Asserted Patents. Third, the SAC fails to adequately allege the additional elements required for inducement and contributory infringement. In particular, the SAC fails to adequately plead MPS's specific intent to cause infringement required for inducement. And regarding contributory infringement, the SAC fails to adequately plead knowledge that MPS's components are especially adapted for use in an infringement and are not suitable for substantial non-infringing use.

1. Volterra fails to sufficiently allege an underlying act of direct infringement to support indirect infringement.

Because Volterra has failed to adequately plead the requisite underlying act of direct infringement, its indirect infringement allegations necessarily fail.

In addition to Volterra’s failure to plead certain structural and operational elements (*supra* Section V.A), the underlying direct infringement allegations are deficient for a second independent reason—Volterra fails to adequately allege the existence of any third party that directly infringes the Asserted Patents.

At best, the SAC identifies a hypothetical group of individuals who attended the 2019 trade show and received promotional materials about the 48V-1V Power Solution. But identifying a “general group of possible direct infringers” is not enough. *Varian Med. Sys., Inc. v. Elekta AB*, 2016 WL 3748772, at *4 (D. Del. July 12, 2016). A claim of indirect infringement cannot survive a motion to dismiss where there is no allegation that “any of this group of possible direct infringers ever *actually purchased the [Accused Product]*” or any “suggest[ion] of some other scenario in which these third parties *in fact have used the accused product in an infringing way.*” *Id.* (emphases added); *see also Execware, LLC v. Staples, Inc.*, 2012 WL 6138340, *3 (D. Del. Dec. 10, 2012) (insufficient to allege that Staples merely “*offer[ed]* to its customer use of its software; must allege that “Staples’ customers *actually used* the accused software” (emphases added)).

Absent such support, all of Volterra's allegations relating to the use, sale, offer for sale, and importation of the "Accused Product" are insufficient.

Volterra's other allegations about encouraging "customers" to use two MPS controllers that support a "Couple Inductor mode" are even weaker. *Id.* ¶¶24(b-c), 46(b-c), 64(b-c). These controllers are not Accused Products. Nor does Volterra allege that either of these controllers infringe the Asserted Patents in any way. Thus, even assuming that MPS encourages customers to use these controllers, those customers cannot be alleged to directly infringe.

2. Volterra fails to sufficiently plead pre-suit knowledge of the Asserted Patents

Volterra's indirect infringement claims should be dismissed for a second reason. Volterra fails to sufficiently allege that MPS had the requisite knowledge of the Asserted Patents. The SAC alleges that this requirement is satisfied by the filing of the original Complaint or vague, generalized allegations regarding pre-suit knowledge of Volterra's patent portfolio. Neither of those allegations are sufficient.

As the Court acknowledged during the scheduling conference, the complaint cannot be the sole source of actionable knowledge required for indirect infringement. Ex. A at 22:6-23:18; *VLSI Tech.*, 2019 WL 1349468, at *2.

Volterra's additional allegations of knowledge are also deficient. First, none of these allegations, except one, relate to any *specific* Asserted Patents. The SAC

alleges that MPS was aware that Volterra had a “patent portfolio related to coupled inductor based voltage converters.” *Id.* ¶¶23(a-c), 45(a-c), 63(a-c). This generalized knowledge of a broad category of Volterra’s patents is not enough. *See Midwest Energy Emissions Corp. v. Vistra Energy Corp.*, 2020 WL 3316056, at *7 (D. Del. June 18, 2020) (generalized allegations of knowledge of a patent portfolio insufficient to support knowledge of specifically asserted patents required to plead indirect infringement).

Second, the only allegation of pre-suit knowledge that specifically identifies an Asserted Patent is too tenuous and speculative. The citation to the ’986 patent in Dr. Zhou’s dissertation is too far removed to plausibly impute actual knowledge of the ’986 patent to MPS for purposes of indirect infringement. First, the citation is buried in a list of 135 other citations. *See EON Corp. IP Holdings LLC v. FLO TV Inc.*, 802 F. Supp. 2d 527, 533–34 (D. Del. 2011) (insufficient pleading of “knowledge” where the asserted patent was cited as “one of fourteen” and “one of ninety-eight” patents cited in defendants’ license agreement involving non-asserted patents). Second, even if Dr. Zhou knew about the ’986 patent as part of his graduate school work, that knowledge cannot be imputed to MPS. *See ReefEdge Networks, LLC v. Juniper Networks, Inc.*, 29 F. Supp. 3d 455, 458–59 (D. Del. 2014) (insufficient pleading of pre-suit knowledge of the patents-in suit for purposes of inducement where plaintiff “makes no specific allegations linking the

knowledge [defendant's employee] may have acquired from her work at [third party corporation] to her work at [defendant corporation]”). Third, even if Dr. Zhou’s awareness of the ’986 patent could be imputed to MPS when he joined in 2006, Volterra alleges no facts supporting how this knowledge would not have gone stale by the time the alleged infringing conduct commenced 14 years later (e.g., demonstration of the accused 48V-1V at the 2019 trade show). There are simply too many steps that need to be linked for a court to infer that knowledge is met. *See EON*, 802 F. Supp. 2d at 533–34; *Fluidigm Corp. v. IONpath, Inc.*, 2020 WL 408988, at *3 (N.D. Cal. Jan. 24, 2020) (awareness of a relative of two asserted patents eight years before issuance of asserted patents weighed against finding sufficient pleading of pre-suit knowledge).

The citations in Mr. Dong’s dissertation are even weaker. Those citations are not of the Asserted Patents, but rather papers published by a named inventor of the Asserted Patents.

3. Volterra fails to sufficiently plead other elements required for inducement and contributory infringement

Volterra’s indirect infringement claims should be dismissed for a third reason – the SAC fails to plead the requisite specific intent or to show that MPS knew the components of the 48V-1V were especially adapted for infringement.

Volterra’s inducement claim fails because the SAC does not sufficiently plead that MPS had “specific intent” to cause any third parties to infringe. First,

though the SAC alleges general “coordinat[ion]” between MPS and suppliers to manufacture coupled inductors allegedly included in the Accused Products, Volterra alleges no specific facts about MPS’s role in this allegedly coordinated effort, much less whether it was MPS who provided information about any allegedly infringing design. D.I. 74 ¶¶24(d), 46(d), 64(d); *E.I. Du Pont de Nemours & Co. v. Heraeus Holding GmbH*, 2012 WL 4511258, at *7 (D. Del. Sept. 28, 2012) (specific intent to induce infringement insufficiently pleaded where complaint lacked factual allegations about “the nature of the relationship between Defendants and their customers.”). Second, though the SAC also alleges facts about MPS’s instructions to operate two controllers in a “Coupled Inductor mode,” these facts are not enough to satisfy specific intent to cause infringement because, as discussed, there are no allegations that these two controllers infringe the Asserted Patents. *Id.* (finding insufficient intent to induce infringement where complaint failed to allege “how the sale of Defendants’ products relates to the patented method referenced in the [Asserted Patent]”).

Volterra’s contributory infringement claim fails because the SAC does not allege any facts that MPS knew that its components (e.g., MP2888A, MP2965) were “especially adapted for use in an infringement and not suitable for substantial non-infringing use.” Even assuming that these controllers are capable of operating in “Couple Inductor mode,” Volterra’s “mere allegation” that the two controllers

“may be used to infringe is not sufficient to allow a reasonable inference that” it has “**no** substantial noninfringing uses.” *Pragmatus AV, LLC v. Yahoo! Inc.*, 2012 WL 6044793, at *16 (D. Del. Nov. 13, 2012) (emphasis in original). Indeed, Volterra’s own allegations undermine any such inference. As reproduced below, the SAC itself makes clear that couple inductor mode can be both enabled and disabled.

Bits	Bit Name	Description
15:10	RESERVED	Unused. X indicates that writes are ignored and reads are always 0.
9	OCW_PWRALT_EN	Enable bit to assert PWR_IN_ALT# when the sensed output current is higher than IOUT_OC_WARN_LIMIT. IOUT_OC_WARN_LIMIT is set with the PMBus command IOUT_OC_WARN_LIMIT (4Ah). 1'b0: does not assert PWR_IN_ALT# when IOUT exceeds the OC warning limit 1'b1: assert PWR_IN_ALERT# when IOUT exceeds the OC warning limit
8	PH1_CPL_EN	Enable couple inductor mode in 1-phase operation. This bit is for Rail 1 only. When enabled, at 1-phase mode, PWM4 also pulls low when PWM1 is high, so the low-side MOSFET of Phase 4 is on to conduct the Phase 4 coupled current. 1'b0: disable couple inductor mode for 1-phase operation 1'b1: enable couple inductor mode for 1-phase operation
7	CPL_MODE_EN	Enables Rail 1 couple inductor mode. 1'b0: disable couple inductor mode 1'b1: enable couple inductor mode

Bits	Bit Name	Description
7:6	RESERVED	Unused. X indicates that writes are ignored and always read as 0.
5	COUPLE_INDUCTOR_PWM6	PWM6 performance selector to fit coupled inductor operating mode. 0: PWM6 remains in tri-state when the controller is running in 1-phase CCM or DCM. This is used for normal inductor operating mode. 1: PWM6 pulls low while PWM1 is high when the controller is running in 1-phase CCM or DCM. This is used for coupled inductor operating mode.
4	COUPLE_INDUCTOR_EN	Enable bit for coupled inductor operating mode. 0: disable 1: enable

Id. ¶24(b) (emphases added). **Equal** capability of operating in allegedly infringing and non-infringing modes is not enough to allow a Court to reasonably infer that the controllers are **not suitable for substantial** non-infringing use.

VI. CONCLUSION

The SAC should be dismissed. Because Volterra's direct infringement claims fail, its indirect infringement claims must fall too. But even assuming the direct infringement claims survive, the indirect infringement claims should still be dismissed for the three additional independent grounds discussed above.

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**CERTIFICATE OF COMPLIANCE WITH STANDING ORDER
REGARDING BRIEFING**

Pursuant to the November 6, 2019 Standing Order Regarding Briefing in All Cases, I certify that the font of this brief is Times New Roman, the type is 14-point, and the total word count is 4,814 words as calculated by the word-processing system used to prepare the filing.

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